

SPECIES: Scientific [common]	<i>Gavia immer</i> [Common loon]
Forest:	Bridger-Teton National Forest
Forest Reviewer:	Ashley Egan
Date of Review:	08/28/2018; reviewed May 2025
Forest concurrence (or recommendation if new) for inclusion of species on list of potential SCC: (Enter Yes or No)	NO

FOREST REVIEW RESULTS:

1. The Forest concurs or recommends the species for inclusion on the list of potential SCC:
Yes No
2. Rationale for not concurring is based on (check all that apply):
 Species is not native to the plan area
 Species is not known to occur in the plan area
 Species persistence in the plan area is not of substantial concern

FOREST REVIEW INFORMATION:

1. Is the Species Native to the Plan Area? Yes No
 If no, provide explanation and stop assessment.
2. Is the Species Known to Occur within the Planning Area? Yes No
 If no, stop assessment.

Table 1. All Known Occurrences, Years, and Frequency within the Planning Area

Number of Individuals	Number of Breeding Sites	Ranger District
2	0	Greys River
1	0	Kemmerer
1	0	Big Piney
74	3	Pinedale
49	1	Blackrock
13	0	Jackson

Wyoming Natural Diversity Database; USFS Natural Resource Information System; WGFD (May 2025)

Table 2. Bridger-Teton National Forest loon occupancy and reproductive success 2022-2024.

LAKE NAME	Territorial Pair	Nesting Pair	Chicks Hatched	Chicks Survived	Unpaired Adult
Arizona Lake	2	1	1	1	0
Burnt Lake	0	0	0	0	1
Blueberry Lake	1	1	0	0	0
Horseshoe Lake	1	1	0	0	0

*Brown C., Savoy L., Evers D., and Constabel J. Biodiversity Research Institute COLO Report 2022-2024.

* Keeney K., Cronin, K., and Walter Wehtje. Ricketts Conservation Foundation COLO Report 2022-2024.

- a. Are all Species Occurrences Only Accidental or Transient?

Yes___ No_X__

If yes, document source for determination and stop assessment.

- b. For species with known occurrences on the Forest since 1990, based on the number of observations and/or year of last observation, can the species be presumed to be established or becoming established in the plan area?

Yes_X__ No___

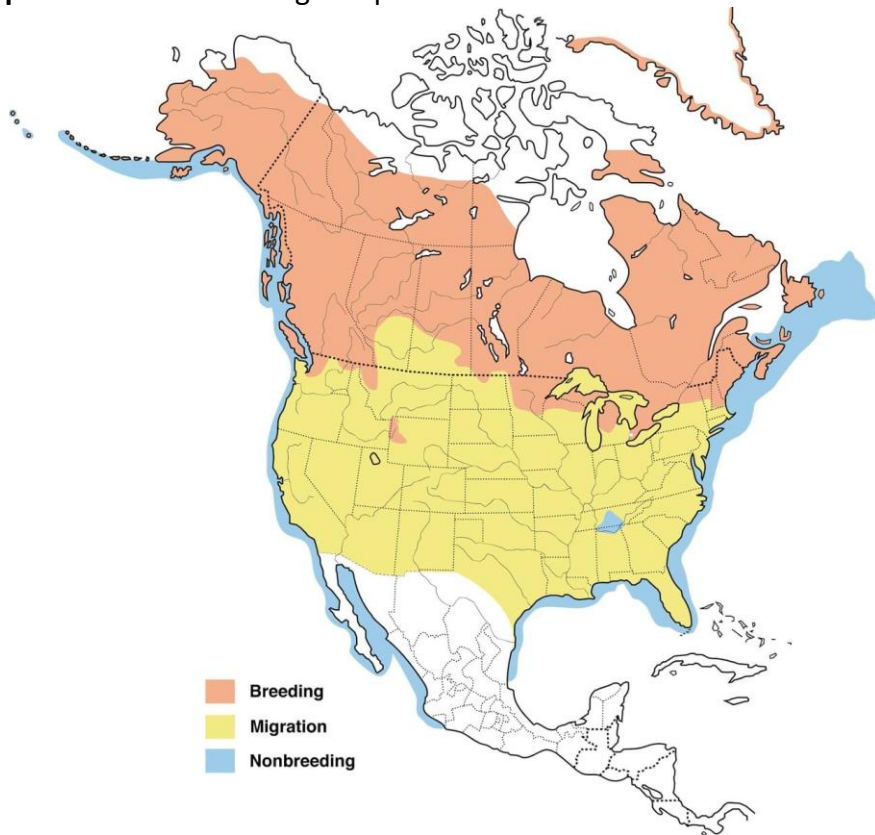
If no, provide explanation and stop assessment.

- c. For species with known occurrences on the Forest predating 1990, does the weight of evidence suggest the species still occurs in the plan area?

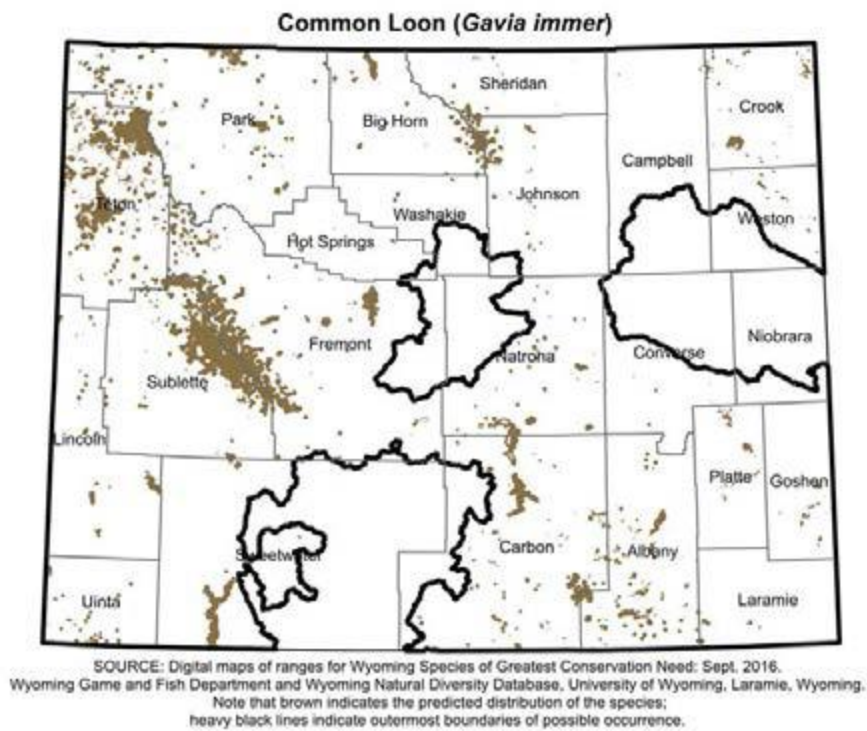
Yes_X__ No___

If no, provide explanation and stop assessment.

d. **Map 1.** Common loon range map of North America.

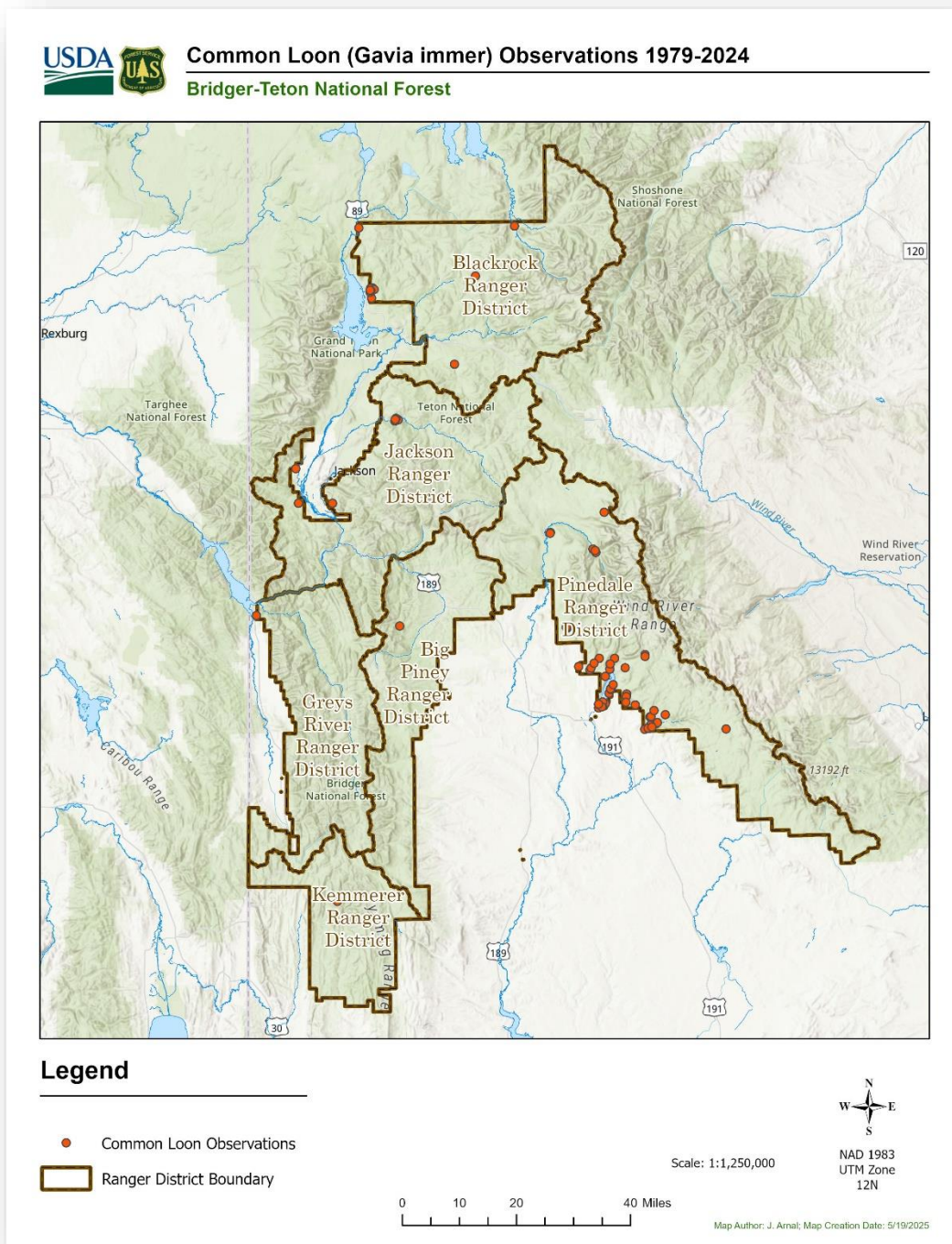


e. **Map 2.** Range and predicted distribution of *Gavia immer* in Wyoming.



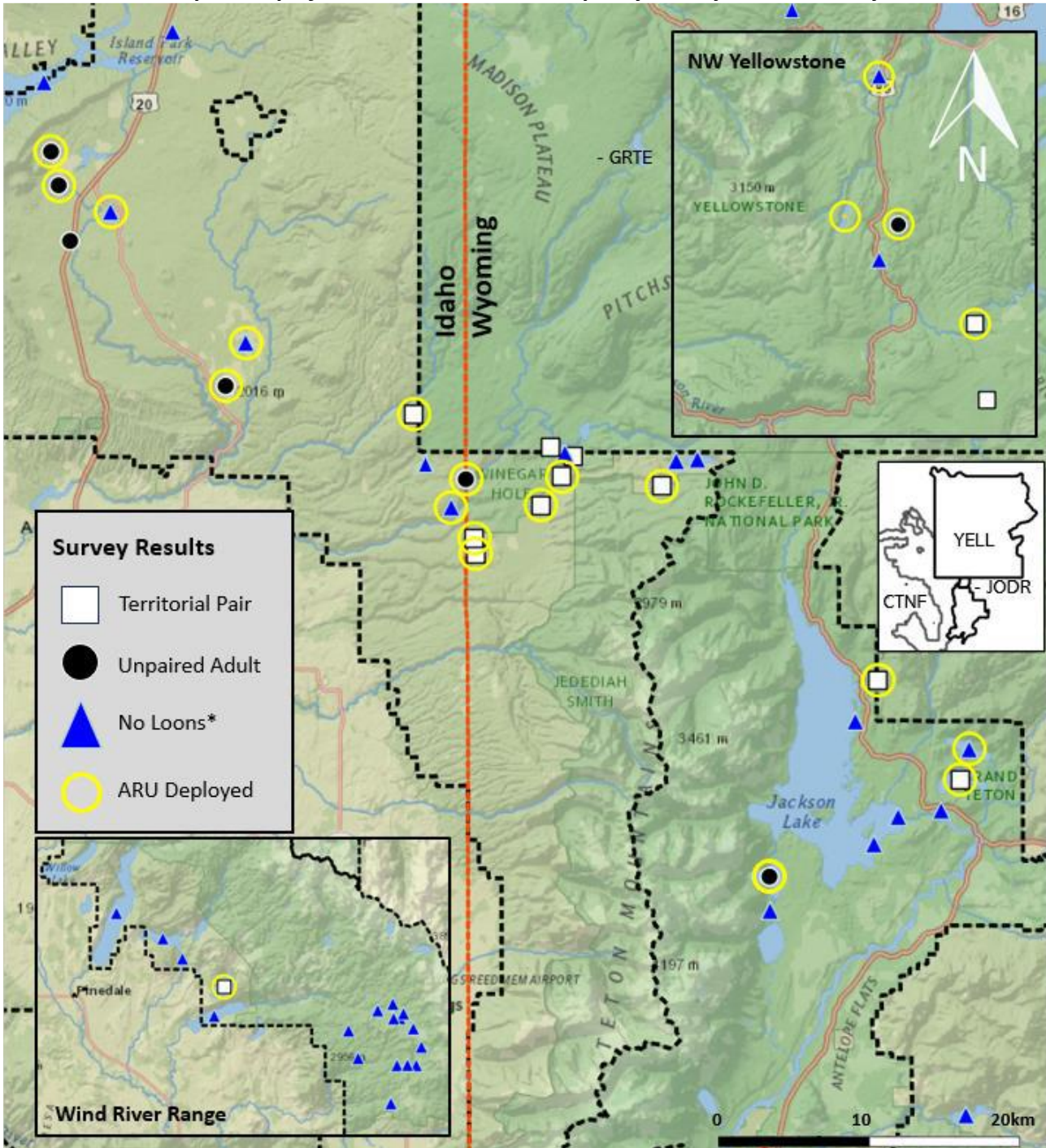
Wyoming Game and Fish Department. 2017. State Wildlife Action Plan. Common loon (*Gavia immer*).

f. **Map 3.** Map of Common loon occurrences on the Bridger-Teton National Forest.



Wyoming Natural Diversity Database, USFS Natural Resource Information System, and Center for Loon Conservation-Biodiversity Research Institute [May2025]

Map 4. Map of Common Loon Site Occupancy Surveys in the GYE by BRI – 2023.



Map 4. Sites surveyed by Biodiversity Research Institute in the Greater Yellowstone Ecosystem in 2023; map centered around NW Wyoming / Idaho border. BTNF: Bridger-Teton National Forest; CTNF: Caribou Targhee National Forest; GRTE: Grand Teton National Park; JODR: John D. Rockefeller Jr. Memorial Parkway; YELL: Yellowstone National Park. *A lack of documented Common Loons does not reflect a confirmed absence. Not all sites receive the equal coverage.

	At moderate risk of extirpation in the jurisdiction due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
WGFD	<p>NSS1 (Aa), Tier I</p> <p><i>Population Status: Imperiled</i> - Population size or distribution is restricted or declining and extirpation is possible <i>Limiting Factors: Extreme</i> - Limiting factors are severe and continue to increase in severity <i>Tier I: High priority</i></p> <p><i>[The WGFD's Species of Greater Conservation Need (SGCN) designation process is based upon its Native Species Status (NSS) classification system that compares population and limiting factor variables using a 16 cell matrix. As a species moves from a placement closest to the upper left corner of the matrix (Aa/NSS1) toward the lower right corner (Dd/NSS7) the species' population status in Wyoming is considered more secure. Numerical scores were assigned to each of these variables and summed to provide a total score (i.e. NSS3). SGCN were placed into one of three tiers based on their total score: Tier I – highest priority, Tier II – moderate priority, and Tier III – lowest priority.]</i></p> <p>(WGFD - Wyoming Species of Greatest Conservation Need)</p>
WYNDD	<p>Wyoming Contribution Rank: High – The level of the Wyoming populations taxon contributes to the range-wide persistence of that taxon.</p> <p>Considered a WYNDD “Species of Concern”</p> <p><i>Species vulnerable to extirpation at the global or state level due to:</i></p> <ul style="list-style-type: none"> <i>a. their rarity (e.g., restricted distribution, small population size, low population density)</i> <i>b. inherent vulnerability (e.g., specialized habitat requirements, restrictive life history)</i> <i>c. threats (e.g., significant loss of habitat, sensitivity to disturbances)</i> <p>(Wyoming Natural Diversity Database - Species of Concern)</p>
USDA Forest Service	<p>Region 4: Sensitive Species</p> <p><i>Those plant and animal species identified by a Regional Forester for which population viability is a concern, as evidenced by</i></p> <ul style="list-style-type: none"> <i>a. Significant current or predicted downward trends in population numbers or density.</i> <i>b. Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.</i> <p>(FSM 2670.5 – Threatened, Endangered & Sensitive Species)</p>
UDI FWS	No Special Status; Migratory Bird - Listed on the 1987 and 1995 lists of migratory nongame birds of management concern in the U.S.

WY BLM	No Special Status
IUCN	<p>LC – Least Concern (as of 2018)</p> <p><i>A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category. (IUCN – Red List Categories and Criteria)</i></p>

Table 3. Status summary based on best available scientific information.

Species (Scientific and Common Name): <i>Gavia immer</i> [Common Loon]	
Criteria	Rationale
Distribution on Bridger-Teton National Forest	Common loons are a migrant species of North America, found throughout the United States and Canada (Map 1). In Wyoming, most common loon occurrence records are located throughout the Greater Yellowstone Ecosystem (GYE) including Grand Teton and Yellowstone National Parks, the Caribou-Targhee National Forest, and the Bridger-Teton National Forest (Map 4). The Bridger-Teton National Forest overlaps with only a handful of breeding populations found in the very northwest corner of the state (Map 5). The remainder of the state is within identified migration range, where the species distribution is rare and patchy due to their association with large lakes and specific habitat requirements (Map 2). Breeding on the BTNF occurs where habitat is suitable, contributing to the overall persistence of Common loon populations. Loon occupancy records are on the Jackson, Blackrock, and Pinedale Ranger Districts suggesting distribution across the Forest (Map 3; Table 1). The Wind River Range of the Pinedale Ranger District has the largest concentration of loons observed. These observations suggest that loons are using these lakes during spring and fall migration (Spagnuolo et al. 2016) with 2 nesting pairs identified. A third breeding pair on the BTNF resides on Arizona Lake, located on the Blackrock Ranger District.
Abundance on the Bridger-Teton National Forest	According to the Wyoming Game & Fish, common loons are considered <i>Very Rare</i> , and breeding pairs in particular, are very rare in Wyoming (WGFD 2017). As of 2024 there were 3 breeding/territorial pairs on the BTNF, out of the 22 territorial and 19 nesting pairs in the GYE (Brown et al. Unpublished Loon Report. 2024). Currently there are 3

Species (Scientific and Common Name): <i>Gavia immer</i> [Common Loon]	
Criteria	Rationale
	<p>breeding pairs, indicating there is suitable habitat across the Forest, particularly when paired with proper conservation measures during the nesting season. However, abundance is low.</p> <p>From 2009 to 2015, surveys for the Integrated Monitoring in Bird Conservation Regions (IMBCR) program did not detect Common loon (Woiderski et al 2018). Recent surveys detected a few resident loons in the Wind River Range on the BTNF during the breeding season, suggesting that habitat could support breeding populations (WGFD 2017; Unpublished, Loon Working Group Meeting Notes, 2017).</p>
Population Trend on the Bridger-Teton National Forest	<p>Common loon populations are considered to be in a moderate decline for the state of Wyoming (WGFD 2017). According to the Biodiversity Research Institute, pair counts in areas of northwest Wyoming outside Yellowstone National Park have remained relatively stable at approximately six pairs observed each year, over the past five years (Low et al. 2017). While the number of nesting pairs appears to be increasing over the last few years, an increase in survey efforts and recent chick recruitment may have a direct correlation. Wyoming trend data from the North American BBS suggest that loons experienced a long-term (1966–2015) decline of 2.07% and short-term (2005–2015) decline of 1.89% annually (Sauer et al 2017). However, both of these state estimates are statistically insignificant.</p> <p>Survey efforts identified 22 territorial loon pairs in the GYE in 2024. Most of the territorial pairs (65%) were observed in Yellowstone National Park (YNP), while four (19%) were found on the Caribou-Targhee National Forest (CTNF), and three (15%) on the Bridger-Teton National Forest (BTNF) and one (1%) in Grand Teton National Park (GTNP). A total of thirteen chicks were produced in YNP, accounting for 65% of the region’s productivity, while the BTNF, CTNF, and Grand-Teton National Park (GTNP) produced 9%, 25%, and 1% of the region’s chicks, respectively (Ricketts. 2024). Banding of Common Loons in the GYE began in 2013 and BRI continues to maintain capture crews in region, however no captures were conducted in the GYE in 2023 or 2024 to avoid negative impacts to individuals. With BRI having the only capture staff on-site, they advocated against captures as a means of pausing banding until best handling practices are established due to concerns of previous utilization of captures. Reducing site disturbance for all species and asserting animal welfare standards are directly related to maximizing capture odds, minimizing unnecessary repeated or unnecessary capture attempts, as well as good judgement of when not to capture. (Brown et al. 2023; unpublished banding review).</p> <p>Arizona Lake is a highly productive site and the only known occupied location in BTNF outside the Wind River Range. The first documented breeding loon pair on Arizona Lake was in 1987 and there has been a consistent presence on Arizona Lake with only a few years of no breeding/territory loons seen and/or data gaps. A banded female (banded in 2013) at Arizona Lake that had continuously nested at this site (2013-2020) appeared to have been displaced in 2021</p>

Species (Scientific and Common Name): <i>Gavia immer</i> [Common Loon]	
Criteria	Rationale
	<p>by a new un-banded female. The male banded in 2014 remains at Arizona Lake, paired to an un-banded female. The displaced banded female was frequently seen at Halfmoon Bay and other locations on Jackson Lake. Disturbance events were not documented during limited site visits, nor reviewing a one-week trail camera observation period. Historic survey efforts have occasionally elicited off nest movement by incubating individuals, which have led to a reduced scope of survey efforts in recent seasons. Increases in human recreation, not limited to shoreline and watercraft activity, would almost undoubtedly result in negative impacts to breeding pairs at this site. (Brown et al. 2021; unpublished Loon Report) No info is known about previous territorial/breeding loons at Arizona Lake.</p> <p>Arizona Lake, located on the Bridger-Teton National Forest, remains one of the most productive loon territories in the Greater Yellowstone Ecosystem (GYE) and despite being the only consistently-occupied territory in the BTNF, it has accounted for 13% of the GYE's productivity over the past five years (Spagnuolo et al. 2017). For the last eight years, at least one chick has successfully fledged from Arizona Lake, except for 2020, with no successful nesting pairs/chicks.</p> <p>Despite occupancy in 2016, Burnt Lake (Wind River Range, BTNF) did not support a pair in 2017. However, a single adult loon was observed on Burnt Lake and nearby Junction Lake, and there were reports and photographic evidence of two adult loons interacting on Lake of the Woods (Wind River Range, BTNF) (Spagnuolo et al. 2017). By successfully fledging one chick in 2017. Loon presence continued in the Wind River Range in 2021, including the return of a territorial pair at Burnt Lake (BTNF) which nested, marking the first observation of nesting loons in the Wind River Range since 1987. Burnt Lake hosted a territorial pair in 2016 that appeared to dissolve in 2017, with no consistent loon presence detected there until 2021. This site is a popular area for recreationists with camping areas and cabins used by outfitters on its westernmost shore. (Leavitt et al. 2021) This pair returned again in 2022 and had 2 successful chicks, with 2 the following year in 2023 and 1 chick in 2024 after one nest failure.</p> <p>In 2023 was the first recorded chick to hatch and survive in the Horseshoe Lake territory since being confirmed as a territorial pair in 2019. This pair returned in 2024, however, there were no confirmed hatchlings due to unknown nest failures.</p>
Habitat Trend on the Bridger-Teton National Forest	Common loons prefer clear freshwater lakes and ponds during the breeding season with many small islands for nesting (WGFD 2017). Streams and rivers are generally avoided, although they may utilize oxbows where the current is minimal. Large clear lakes make up less than 2% of the habitat type on the BTNF, suggesting what little habitat is suitable on the BTNF is particularly valuable to Loon at the local, state, and range wide level. Loon habitat and breeding success is heavily influenced by Forest recreation and human disturbance. Many of the Loon observations

Species (Scientific and Common Name): <i>Gavia immer</i> [Common Loon]	
Criteria	Rationale
	are located on lakes with motorized and non-motorized trails, camping, swinging, fishing, and boating. Such uses influence the loons' ability to attempt nesting, and often result in nest failure due to abandonment. See the next section below for more details on threats to Common loon habitat.
Threats to the Species and its Habitat on the Bridger-Teton National Forest	<p><u>Natural Habitat and Species Characteristics</u></p> <p>The breeding loon population in the GYA, including the BTNF, is extremely small and isolated, making it highly vulnerable to habitat loss both directly and indirectly from human disturbance. Specific habitat attributes are important to the success of this population and are likely limiting abundance and distribution on the BTNF. Lakes size, amount of emergent vegetation, and time period the lake is free of ice are important habitat components. This species is also less likely to occupy new sites because of their high site fidelity and low dispersal rates (WGFD 2017). Additionally, loons are limited by their low fecundity, with only one or two young raised a year, as well as the age (3 years) in which adults successfully breed (WGFD 2017).</p> <p>This species can also exhibit interspecific competition where sibling aggression can be severe, especially during food shortages, and may result in the death of the younger subordinate (NatureServe 2017). Additionally, adults and chicks that wander into adjacent territories have been killed by neighboring loons or has resulted in territorial nest abandonment. Competition with other species, such as swans has also been documented.</p> <p><u>Human Disturbance</u></p> <p>Recreational activities such as boating, hiking, and fishing have been known to cause nest abandonment or failure (WGFD 2017; NatureServe 2025). A decrease in reproductive success has been documented on lakes in the GYA as a result from human recreation. Loons exhibit behavioral modifications in response to moderate recreational activity on many lakes (NatureServe 2025). This may cause a decrease in nest success if adults are flushed from the nest, ultimately due to eggs cooling and increased predation.</p> <p>Motorized water recreation may have more impacts on loons than non-motorized. Loons are more easily able to avoid non-motorized forms of recreation such as canoes rather than those like motorboats, and chicks are less likely to be separated from their parents (NatureServe 2025). Additionally, wakes from motorized recreation on lakes in combination with high water levels, may cause nest destruction.</p> <p>Although recreational pressures can impact breeding loons, other studies report that loons can successfully breed with such disturbances. Evidence of the loon's ability to acclimate suggests that properly designed mitigation efforts and, more importantly, outreach initiatives can be successful in many instances (Evers 2007 <i>in</i> Spagnuolo and Evers</p>

Species (Scientific and Common Name): *Gavia immer* [Common Loon]

Criteria	Rationale	
	<p>2016).</p> <p><u>Water Levels</u> Common loons may be impacted by fluctuating water levels, impacting nests during the spring runoff (WGFD 2017; NatureServe 2025). Reduced water level may also increase nest abandonment, reducing nest concealment and influencing nest predation.</p> <p><u>Toxic Contaminates and Disease</u> Lead has been known to cause reproductive failure or even death in individuals from accidental ingestion. Additionally, exposure to other contaminants such as heavy metals, synthetic chemicals, and cyanotoxins are of concern to the survival and reproduction of this species (WGFD 2017; NatureServe 2025). Loons are also susceptible to epidemics and many types of parasites (NatureServe 2025). In some cases, mass die offs has been documented.</p>	

Summary and recommendations:

The Bridger-Teton National Forest (BTNF), located within the Greater Yellowstone Ecosystem (GYE), overlaps with a small isolated breeding population of the Common loon. While there are incidental occurrences across the Forest, there are very few known nest locations, nest success rate remains a concern, distribution across the GYE remains restricted, and abundance is low. Most observation records on the BTNF are located on the Pinedale Ranger District just west of the Wind River Mountain Range, and adjacent to the BTNF, within Grand Teton and Yellowstone National Parks. There are four territorial nesting pairs that utilizes the BTNF, indicating that suitable breeding habitat is present across the BTNF and an increase in inventory and monitoring is necessary. Nest success on the BTNF, practically the Arizona lake nest, contributes to the overall persistence of Common loon populations across the GYE and northwest Wyoming. Recent nesting success and productivity (i.e., since 2012) indicates the GYE population may be reacting positively to a considerable amount of interagency and non-governmental organization conservation techniques, including the Greater Yellowstone Common Loon Working Group (Caribou-Targhee National Forest, Bridger-Teton National Forest, Yellowstone National Park, Grand Teton National Park, Wyoming Game and Fish Department, Biodiversity Research Institute, and Ricketts Conservation Foundation).

The few breeding territories on the BTNF, including Arizona Lake in the Teton Wilderness, contribute to the GYE population through successful reproduction. The location of Arizona lake, protected from heavy human disturbance within the Wilderness, provides optimal habitat conditions - confirming disturbance is important variable and conservation of other nesting areas across the GYE critical. It is imperative that the BTNF to continue to provide suitable nesting habitat for GYE loons in the future. Species of Conservation Concern inventory and monitoring objectives, and conservation strategies will be vital to the success of this isolated population.

Species (Scientific and Common Name): <i>Gavia immer</i> [Common Loon]		
Criteria	Rationale	
<p>When considering (1) the loon status/rank of many other entities, including the WGFD, (2) this is an isolated breeding population that overlaps directly with the BTNF, (3) the BTNF hosts one of the most consistently productive single nest locations that contribute significantly to the GYE population, and (4) threats to an already unstable population are relevant and present at the local level - the GYE loon population is a candidate for future conservation. Until nesting success rates increase due to established conservation measures, there is a substantial concern for the species capability to persistence on the Forest over the long-term and it is recommended that the Common loon is a Species of Conservation Concern for the Bridger-Teton National Forest.</p>		
Evaluator(s): Ashley Egan		Date: May 6, 2025
Literature Citations:		
<p>Low, K., A. Leavitt, C. Timberlake, V. Spagnuolo. 2017. Greater Yellowstone Ecosystem Common Loon (<i>Gavia immer</i>) Summary Report. Biodiversity Research Institute, Gorham, ME. Report 2017.</p>		
<p>Evers, D.C. 2007. Status assessment and conservation plan for the Common Loon in North America. U.S. Fish and Wildlife Service Tech. Rept. Hadley, Massachusetts.</p>		
<p>NatureServe. 2025. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://explorer.natureserve.org. (Accessed: May 5, 2025).</p>		
<p>Sauer, J. R., D. K. Niven, J. E. Hines, D. J. Ziolkowski, Jr, K. L. Pardieck, J. E. Fallon, and W. A. Link. 2017. The North American Breeding Bird Survey, Results and Analysis 1966 - 2015. Version 2.07.2017 USGS Patuxent Wildlife Research Center, Laurel, MD.</p>		
<p>Spagnuolo, V. and D.C. Evers. 2016. Status Report for the Common Loon: Wyoming. Biodiversity Research Institute. Portland, Maine. Science Communications Series BRI 2016-21. 8 pages.</p>		
<p>Spagnuolo, V., K. Low. 2017. 2017 Common Loon Study Summary Report. Biodiversity Research Institute, Gorham, ME. Report 2017.</p>		
<p>Spagnuolo, V.A., A.J. Byrd, J. Fair, C.W. Brown, C. Persico, G. Stout, M.R. Kneeland, and D.C. Evers. 2016. Wyoming Common Loon (<i>Gavia immer</i>) Summary Report 2015. Report # 2016-07. Biodiversity Research Institute, Gorham, Maine.</p>		
<p>Woiderski, B. J., N. E. Drilling, J. M. Timmer, M. F. McLaren, C. M. White, N. J. Van Lanen, D.C. Pavlacky Jr., and R. A. Sparks. 2018. Integrated Monitoring in Bird Conservation Regions (IMBCR): 2017 Field Season Report. Bird Conservancy of the Rockies. Brighton, Colorado, USA.</p>		

Species (Scientific and Common Name): <i>Gavia immer</i> [Common Loon]		
Criteria	Rationale	
	Wyoming Game and Fish Department. 2017. State Wildlife Action Plan. Common Loon (<i>Gavia immer</i>).	
	Greater Yellowstone Common Loon Working Group. 2025.	
	Brown, C., D.C. Evers, and L. Savoy. 2021. Wyoming Common Loon Enhanced Monitoring Investigation: 2021 Technical Report. Report #2021-14. Biodiversity Research Institute, Portland, Maine.	
	Brown, C., K. Low, L. Savoy, and D.C. Evers. 2025. Greater Yellowstone Common Loon Improved Monitoring Investigation: 2024 Technical Report. Report 2025-03. Biodiversity Research Institute, Portland, Maine.	
	Leavitt, A., Spagnuolo, V., Ferrauolo, N., and Wehtje, W. 2021. Ricketts Conservation Foundation Greater Yellowstone Ecosystem Common Loon Report 2021. Unpublished Report #2021-01. Ricketts Conservation Foundation, Little Jackson Hole, Wyoming.	